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ABSTRACT

Based on an initial group of consensus statements developed at the Annenburg Center for Health Science Conference in November 1985, this resource manual for alcohol and other drug abuse education specifies minimum knowledge and skills levels for pediatric physicians. A first section details minimal knowledge and skills in alcohol and other drug abuse including general concepts, prevention, pharmacology and pathophysiology, patient evaluation, patient management, legal and ethical aspects, and impairment of health professionals. A section on teaching strategies recommends the use of a variety of modalities in order to effect change in trainees' knowledge, experience, and attitudes. In the next section frequent program and student evaluation is recommended for the most effective results. A final section treats some of the challenges to program implementation found within medical schools and the medical community at large and suggests strategies for dealing with those impediments. Includes 9 references. (JB)

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National Institute on Alcohol Abuse and Alcoholism
National Institute on Drug Abuse

Pediatric Minimal Knowledge and Skills:

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Ambulatory Pediatric Association

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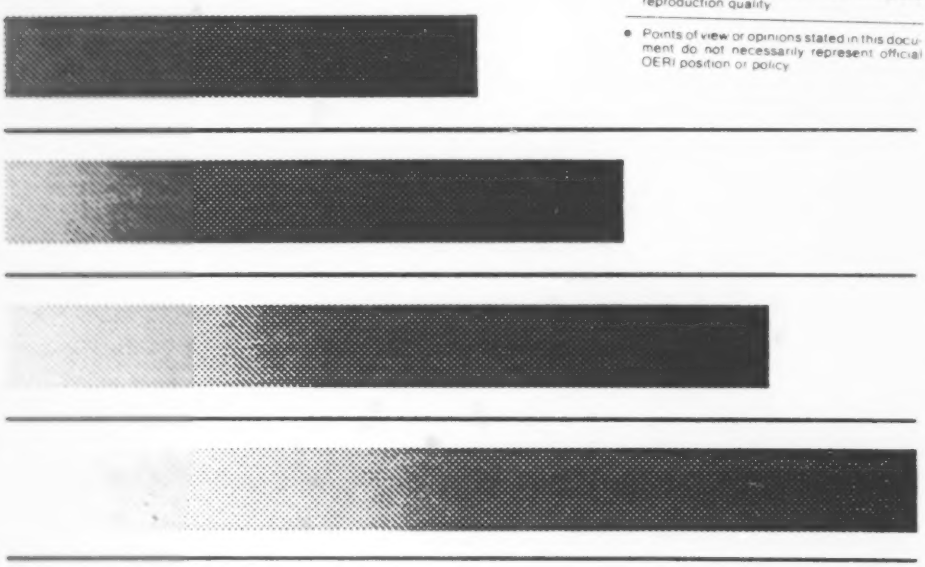

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Pediatric Minimal Knowledge and Skills:

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PREFACE

This Resource Manual for Alcohol and Other Drug Abuse Education in Pediatrics is the result of the efforts of the Ambulatory Pediatric Association's recent project entitled The Identification and Assessment of Alcohol/Drug Medical Education Products/Approaches in Pediatrics. The minimum knowledge and skills statements herein were based on an initial group of consensus statements from the Annenburg Center for Health Science Conference in November 1985.

In a collaborative effort, members of the Ambulatory Pediatric Association, the American Psychiatric Association, the Society of Teachers of Family Medicine, and the Society for Research and Education in Primary Care Internal Medicine produced the Core Minimal Knowledge and Skills in Alcohol and Other Drug Abuse, defining the minimal competencies for all practicing physicians. In addition to this generic document, individual working committees from the four specialty groups developed competency statements unique to their particular disciplines. More detailed and specific than the generic document, each specialty-specific document incorporates competencies appropriate and necessary to its particular discipline.

This publication is intended to serve as a resource to educators interested in developing alcohol and other drug abuse curricula, particularly members of the Ambulatory Pediatric Association, Pediatric Residency Training Directors, and those concerned with the education and training of pediatricians at all levels.

PEDIATRIC MINIMAL KNOWLEDGE AND SKILLS IN ALCOHOL AND OTHER DRUG ABUSE

Introduction

The abuse of alcohol and other drugs is one of our nation's most serious health threats. Although use of these substances appears to be declining (Johnston, O'Malley, and Bachman 1987), experimentation is occurring at a much younger age. According to a survey by the National Parents' Resource Institute for Drug Education (1986), approximately one out of three sixth graders has tried beer or wine. Of alcohol users in the 9- to 13-year-old age group, 14 percent used alcohol at least monthly (Hutchinson and Little 1985). Marijuana, the most commonly used other drug, was reportedly tried by one of every five eighth graders participating in a recent statewide survey (Maryland Drug Abuse Administration 1985).

The use of alcohol and other drugs among the high school population is more pervasive. Approximately 90 percent of all high school seniors have tried alcohol, and 4.8 percent reported daily use. Fifty-one percent of high school seniors reported having smoked marijuana at some time, while daily or near daily usage was reported by 4 percent of this population (Johnston, O'Malley, and Bachman 1987).

In the nation as a whole, alcohol and other drug abuse is a common problem. Thirty-three percent of the American population over 11 years of age have used either marijuana, hallucinogens, cocaine, heroin, or a psychotherapeutic drug for nonmedical purposes at some time in their lives (Segal et al. 1983). Despite this clear epidemiological evidence, a number of physicians fail to recognize and diagnose such abuse among their patients. For example, the majority of respondents from medical schools and residency programs surveyed recently by the Ambulatory Pediatric Association (APA) stated that 1 percent or less of their patients had a primary diagnosis of alcohol or other drug abuse problems.

The inability to identify substance abuse as a significant health problem stems primarily from the physician's self-acknowledged lack of information and skills. In a statewide survey of primary care physicians, respondents estimated that 5 percent or less of physicians felt successful in helping their patients with alcohol and other drug abuse problems (Wechsler et al. 1983). The American Medical Association's Center of Health Policy Research (Sadler 1984) reported that only 27 percent of polled physicians felt competent to diagnose and treat alcoholic patients. Contributing factors identified by physicians included inadequate training, attitudinal barriers, and constraints of the medical education system.

With enhanced knowledge and skills in the area of substance abuse, primary care physicians can make great strides in reducing the morbidity and mortality rates associated with drug and alcohol abuse and related problems. In addition, the costs to society stemming from these problems—estimated to total almost $218 billion in 1983 (Kamerow, Pencus, and Macdonald 1986)—could also be reduced.

General Concepts

Definitions

Medical students, residents, and practicing pediatricians should be able to define the following terms:

- Abuse
- Addiction
- Dependence
- Tolerance
- Withdrawal syndrome

Epidemiology

Medical students, residents, and practicing pediatricians should have basic knowledge of incidence, prevalence, morbidity, mortality, and demographic differences regarding alcohol and other drug abuse. They should also be able to identify predominant patterns of alcohol/drug use and abuse.

Risk Factors

Medical students, residents, and practicing pediatricians should be able to describe key predisposing factors to alcohol and other drug use and abuse including genetic, familial, peer group, sociocultural, and demographic factors.

Social and Familial Sequelae

Medical students, residents, and practicing pediatricians should be able to describe the unique problems of children of alcoholic and other drug abusing parents. They should also be familiar with the prevalence of neonatal drug abuse related syndromes, and with socioeconomic costs of alcoholism and drug addiction. They should recognize the empirical association between alcohol and other drug abuse and accidents, suicide, and homicide and be familiar with the concepts relating alcohol/drug abuse and familial disharmony.

Prevention

Patient Education

Medical students, residents, and practicing pediatricians should be able to provide anticipatory guidance on the effects of alcohol and other drug abuse to individual patients and their families. In addition, they should demonstrate an understanding of the sociocultural factors that might affect alcohol and other drug abuse prevention including: common reasons for drug use among children and adolescents, how prevention programs might affect them, the family's potential role in substance abuse prevention, and the role of peer pressure in the prevention of substance abuse.

Attitudes

They should also be sensitive to the influence of physician attitudes on the recognition, intervention, selection of treatment options, treatment outcomes, and patient acceptance of a diagnosis of alcohol and/or other drug dependence. Finally, they should demonstrate an understanding of the physician's role in primary prevention.

Pharmacology and Pathophysiology

Medical students, residents, and practicing pediatricians should be able to discuss the basic pharmacologic properties of classes of commonly abused drugs such as stimulants, depressants, opiates, inhalants, hallucinogens, and cannabinoids. In addition, they should understand the principles of the physiology and biochemistry of dependence and addiction. Medical students, residents, and practicing pediatricians should be able to describe or outline: intoxication, acute and chronic adverse reactions and withdrawal syndromes of commonly abused drugs, common behavioral and physiological effects and side effects, and the half-life and duration of action of these drugs. Medical students, residents, and practicing pediatricians should be able to explain drug-drug interactions among commonly abused substances including illicit, over-the-counter, and prescription drugs, as well as describe the actions of common adulterants and impurities of street drugs.

Evaluation of the Patient

History

Medical students, residents, and practicing pediatricians should be able to develop a process for effectively gathering historical data that includes interviewing adolescents or children and their parents to elicit reliable drug histories and being able to recognize and respond appropriately to patient and/or family responses and defense mechanisms that commonly occur during history taking. They should also be familiar with local street names for commonly abused substances; be aware of presenting complaints for psychiatric or medical ill-

nesses that may be indicative of alcohol or other drug abuse; and be familiar with early physical symptoms suggestive of alcohol or other drug abuse that may be found through a review of the medical history, such as unexplained hypertension and arrhythmia.

They should be capable of determining whether social consequences of alcohol and other drug abuse exist, such as poor or inconsistent academic performance, school attendance problems, delinquent behavior, and familial discord, and should be capable of identifying familial and sociocultural issues that predispose a person to and promote continuation of alcohol and drug use.

Medical students, residents, and practicing pediatricians should be able to obtain historical information that might suggest prenatal and neonatal complications of maternal alcohol or other drug abuse, including Fetal Alcohol Syndrome, newborn distress, and newborn withdrawal.

Physical Examination

They should also be able to perform an appropriate physical examination to assist in the diagnosis of alcohol or other drug abuse, intoxication, overdose, withdrawal, and related medical complications, including recognizing intoxication and distinguishing acute and chronic signs for the major substances of abuse. In addition, they should be capable of recognizing behavior incongruous with the patient's background, age-related developmental characteristics, and personality style, as well as performing a systematic examination of organ systems and recognizing cutaneous, infectious, and other abnormalities suggestive of alcohol and other drug abuse.

Laboratory Tests

Finally, they should be able to demonstrate knowledge of available laboratory screening tests and their appropriate use and interpretation.

Patient Management

Consultation

Medical students, residents, and practicing pediatricians should be able to provide directly or obtain consultation for appropriate medical management of acute episodes related to alcohol and other drug abuse.

Intervention

They should be able to intervene effectively and encourage the patient and family to accept treatment through the use of such methods as supportive and nonrejecting confrontation, family intervention, and patient education; and communication skills that foster open discussion of alcohol and other drug abuse and its treatment.

Treatment Modalities

Medical students, residents, and practicing pediatricians should know about available treatment options including differences in treatment philosophies, modalities, and settings. They should also be able to identify the appropriate treatment resources to meet patient needs.

Motivation and Followup

Residents and practicing pediatricians should be able to support the patient throughout the treatment process and following its completion, including identifying realistic treatment goals and expectations of treatment outcome; identifying potential factors contributing to patient relapse during treatment and strategies for preventing or minimizing it; and, finally, providing referrals for followup or aftercare.

Legal and Ethical Aspects

Legal

Medical students, residents, and practicing pediatricians should be familiar with specific State laws as they relate to physician-patient communications and prescribing practices. Residents and practicing pediatricians should be familiar with legal limitations on intervention with children and adolescents.

Ethical

Medical students, residents, and prac-

ticing pediatricians should be familiar with ethical and confidentiality requirements of medical treatment. In addition, they should be aware of the ethical considerations concerning notification and involvement of parents.

Impairment of Health Professionals

Medical students, residents, and practicing pediatricians should be able to describe the factors that make physicians particularly susceptible to abuse of psychoactive substances. In addition, they should be aware of the incidence of alcohol and other drug abuse among physicians and be able to describe how drug and alcohol use by physicians influences their practice. Finally, they should be familiar with laws and regulations about reporting health professionals who are abusing substances and with helping resources and voluntary organizations that can aid impaired physicians.

TEACHING MINIMAL KNOWLEDGE AND SKILLS

The development and endorsement of a set of drug and alcohol competencies for pediatricians is viewed as a necessary precursor to the enhancement of alcohol and other drug abuse teaching. By allowing educators to focus on specific content or skill areas determined essential for pediatricians at various levels of training, the competency statements provide a framework for effective curricula development. The identification of curriculum goals, learner objectives, teaching methods and formats, and evaluation measures all stem from the particular competency to be attained.

In their current form, each competency statement is too broad to be useful in actual teaching. The competency statement must be further detailed to define what is to be taught to the learner, how it will be taught, and how it will be evaluated.

Education and training in alcohol and other drug abuse requires the use of a variety of modalities in order to effect change in trainees' knowledge, experience, and attitudes. Quality teaching, from a pedagogic standpoint, happens best when trainees are allowed to participate in the learning activities as opposed to being passive observers. Likewise, a solid and broad scientific knowledge base is a necessary foundation upon which to build future skills. Because trainees can learn to process and assimilate knowledge through several approaches while developing and practicing important clinical skills, the educator needs to be familiar with and utilize several different teaching formats:

- Lecture
- Seminar
- Required reading
- Computerized self-instruction
- Audiovisuals
- Clinical demonstration (e.g., patient interview by an experienced physician)
- Experiential methodologies (e.g., simulated patient, role playing)
- Supervised clinical care
- Supervised teaching/conference
- Supervised research
- Attendance at self-help or treatment groups

Instructors must actively choose those teaching formats that best suit the information to be imparted and the learning activity to be experienced. The choice of format should also be tempered by the amount of time available, the goals and objectives of the learning experience, the learners' ability, and the instructor's comfort with and knowledge of each available format.

The lecture format, for example, has several strong points. Lecturing requires minimal preparation of materials, is not affected by the number of students in the class, and makes economical use of class space. Moreover, the rate at which information is communicated is dictated by the instructor. But this teaching strategy can have serious weaknesses. The foremost drawback to the lecture approach is that the activity is teacher-centered rather than learner-centered. Student involvement is minimal.

The need to go beyond the lecture format is obvious, given the premise that student involvement is essential for retention, assimilation, and integration of relevant material. In general, the use of more than one teaching format enhances the educational experience for both teacher and

learner. For example, the incorporation of visual aids such as a chalkboard, flip chart, overhead projector, or handouts within a lecture can create learner interest in the subject matter, thereby minimizing the deficiencies while capitalizing on the advantages.

Audiovisual aids provide another useful teaching strategy, although the selection of appropriate and effective material can be time-consuming and costly. While many quality films and videotapes are available, it is important to avoid the temptation to substitute a film for the instructor. Used as a supplement to the teacher, however, audiovisual materials can make the learning experience more interesting and relevant to the learner.

Computer-assisted instruction is another effective method. Although the programs and equipment can be very expensive, this modality can be cost effective when used for large groups. Computerized self-instruction allows the learner to move at his own pace. In addition, the student is immediately evaluated by the computer at each step in the learning process.

Role playing, the process of simulating events, situations, or encounters, is an effective method with many advantages. During the role playing, the learner is active; the experience is student-centered. The student is given the opportunity to experience a situation in a safe setting, exploring the problems inherent in acquiring information and reaching appropriate conclusions. Moreover, role playing allows the students to identify and explore their feelings and attitudes and determine how these affect their behavior. However, for role playing to be an effective learning experience, careful planning is a necessity. For example, a role playing situation may require only 2 participants out of a class of 15. The remaining students must feel involved in the exercise. This requires careful preparation and structure.

Teaching strategies used in clinical settings are different from those used in purely educational settings. Within the clinical setting, case studies no longer come from textbooks. Instead, patients are the source of information, and learning is achieved through dealing directly or indirectly with the patient. For example, through a clinical demonstration, the students witness the physician (instructor) taking a drug history of a patient. Although the student is only indirectly involved with the patient, the nuances and intricacies of the skill are clearly demonstrated. Similarly, by participating in a clinical course rotation, the student, under supervision, is responsible for providing care to the patient. In this situation, the student is learning in the setting that most closely resembles the real world.

In summary, to successfully impart alcohol and other drug abuse knowledge and skills, medical educators and curriculum developers must recognize the strengths and weaknesses associated with each teaching method and the requirements of each learning situation. Contrary to popular practice, the use of one teaching format may not guarantee success; as a matter of fact, using only one teaching approach often hinders success. Conversely, the incorporation of a number of appropriate methods may increase the likelihood of a successful teaching and learning experience.

EVALUATING KNOWLEDGE AND SKILLS

Evaluation, though often overlooked, is a critical component of any well thought out educational program. Despite the abundance of literature that supports this claim, the majority (70 percent) of programs responding to a recent APA Substance Abuse Survey did not formally evaluate the recipients of alcohol and other drug abuse teaching (Adger, McDonald, and DeAngelis unpublished data). Perhaps this lack of evaluation stemmed from a lack of standards. Evaluation requires that explicit objectives be determined for the curriculum, the students, and the individual(s) responsible for its implementation. The development of competency statements in drug and alcohol content and skills provides the necessary basis for measuring the physician's cognitive and clinical abilities. The Pediatric Minimal Knowledge and Skills in Drug and Alcohol statements serve as a backdrop against which physicians can be measured and compared. Before these statements were developed, no agreed-upon standard existed.

Educators and curriculum developers have a number of different vehicles through which evaluation data can be obtained. Interviews, surveys, questionnaires, test results, and course attendance represent but a few of the ways useful information is gathered. As with choosing teaching methods, evaluation strategies must be developed in light of various constraints, such as time, money, and competency.

The cyclical nature of the evaluation process mandates that a teaching program and its participants be continuously assessed. Evaluation should occur at each stage in the development and implementation process. Information obtained at each phase can be used to correct any weakness or deficiency of the program. This type of summative evaluation provides information on the appropriateness and effectiveness of content, methods, materials, and activities used in the curriculum as well as an assessment of the quality of the implementation plan.

Evaluation, if done correctly, provides documented proof of the effectiveness of a curriculum. Program evaluation assesses knowledge, attitude, and behavior changes that result directly from program participation. Assessing the congruence between what occurred and what was supposed to occur and identifying the causes for disparity between the two also provides useful information. This empirical evidence, more importantly, provides the supportive data necessary for monitoring both short- and long-term changes, for influencing behavior, and for ensuring optimal utilization of resources.

IMPLEMENTING KNOWLEDGE AND SKILLS

One of the goals of medical education is to produce physicians who are equipped to deal with the changing health needs of individuals. To meet this goal, the content of medical education must be revised accordingly. Introducing change into medical education, however, has often proved to be an arduous and slow-moving process. Fortunately, the identification and accumulation of positive and negative experiences of past change agents provides a framework through which current medical education revisions can be attempted.

Generic to any change process are several key components that should be addressed. Initially, consensus must be reached that a change is needed. Secondly, a supportive and receptive environment should be developed. And finally, the plan of action or the change agent should be created (or credited) with the proper authority to implement the change.

When this framework is applied to incorporating alcohol and other drug abuse education into the current medical curriculum, specific tasks become evident. To reach a consensus on the need for alcohol and other drug abuse education, for example, those involved must:

1. identify the lack of drug and alcohol education as a problem;

2. determine who is affected by the problem; and

3. determine the scope of the problem.

Given the premise that a positive environment needs to be created, the change agent needs to then identify areas of support and opposition. Potential allies or opponents can come in the form of:

1. students for whom the curriculum is to be developed;

2. faculty interested in alcohol and other drug abuse education;

3. department chairpersons and directors of pediatric residency programs who have the power to approve the curriculum; and/or

4. professional organizations that are interested in educating physicians and are influential in setting standards for medical education/credentialing requirements.

Once these individuals and their position on the issue is identified, explicit roles and relationships must be determined.

The opposition, an often overlooked group, can be a valuable source of information. By allowing opponents the opportunity to participate in the planning stage, potential barriers are identified, planned for, and thus, hopefully, avoided. In addition, involving both supporters and opponents in the early stages of planning engenders a proprietary interest in the identification of the problem and the plan for corrective action, and increases the potential for commitment to the curriculum and its implementation.

Having determined the extent of the problem, who it affects, and who supports or opposes a particular modifying measure, the plan to correct the problem—the development of a drug and alcohol abuse curriculum—is then created. At this stage, awareness of the institutional norms and values will often help to provide a conceptual framework within which the proposed curriculum should be developed. Disparity between the values of the institution and the curriculum may negatively affect, if not totally obstruct, implementation of the curriculum. Sensitivity to all of these issues is critically important.

Finally, some form of authority must be attached to the curriculum to ensure its implementation. One way this might be achieved is to elicit the support of influential professional organizations, such as the Ambulatory Pediatric Association, the American Academy of Pediatrics, the Society for Adolescent Medicine, and the various policymaking organizations such as the Residency Review Committee and the Accreditation Council for Graduate Medical Education. The support and backing of curriculum directors and department chairs gained during the planning stage will add to the validity and importance of the curriculum.

While no one best method exists to incorporate drug and alcohol education into the current medical curriculum, the above mentioned steps can increase the likelihood of the proposed curriculum's implementation. Moreover, through the use of the framework provided, known barriers and obstacles may be avoided.

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